CLAIMS

1. A method of filling a mold with an organic material in the liquid state to mold an optical component, the method including the following steps:

- rise in flowrate (A), from a zero flowrate to a nominal flowrate (Dn) greater than 40 g/min,
- full flowrate filling (B), with the nominal flowrate (Dn) maintained, and
- flowrate reduction (C), to return from the nominal flowrate (Dn) to the zero flowrate,

which method is characterized in that the rise in flowrate (A) step is divided into at least two phases:

- low flowrate start of filling (A1; A1'), until the mold is filled with the material to a height of at least 2 mm at the deepest point of the mold, the flowrate increasing during this phase to a maximum start of filling flowrate (Dd) of less than 20 g/min, and then
- main rise in flowrate (A2), from the start of filling flowrate (Dd) to the nominal flowrate (Dn).

2. A method according to the preceding claim, wherein the height of the material marking the end of the start of filling phase (A1; A1') is less than 12 mm.

3. A method according to either preceding claim, wherein the height of the material marking the end of the start of filling phase (A1; A1') is from 5 to 10 mm and preferably approximately 7 mm.

4. A method according to any preceding claim, wherein the start of filling flowrate (Dd) is from 3 to 8 g/min.

5. A method according to any preceding claim, wherein the nominal flowrate (Dn) is from 50 to 300 g/min.

6. A method according to any preceding claim, wherein the start of filling phase (A1) is divided into

two phases:

- preliminary rise in flowrate (A11), from the zero flowrate to the start of filling flowrate (Dd), and
- low flowrate start of filling plateau (A12), with the start of filling flowrate (Dd) maintained.

7. A method according to the preceding claim, wherein the low flowrate start of filling plateau (A12) is maintained for 4 to 10 seconds.

8. A method according to any of claims 1 to 5, wherein the flowrate during the start of filling phase (A1') is a strictly increasing function of time.

9. A method according to any preceding claim, wherein the rate of rise in flowrate during the main rise in flowrate phase (A2) is from 2 000 to 7 000 $g.min^{-2}$.

10. A method according to any preceding claim, wherein the flowrate reduction step (C; C') is divided into at least two phases:

- main flowrate reduction (C1), from the nominal flowrate (Dn) to an end of filling flowrate (Df) of less than 20 g/min, and
- low flowrate end of filling (C2) at decreasing flowrate, from the end of filling flowrate (Df) to the zero flowrate.

11. A method according to the preceding claim, wherein the end of filling flowrate (Df) is from 3 to 8 g/min.

12. A method according to any preceding claim, wherein the end of filling phase (C22, C23) is divided into two phases:

- low flowrate end of filling plateau (C22), with the end of filling flowrate (Df) maintained, and
- final flowrate reduction (C23), from the end of filling flowrate (Df) to the zero flowrate.

13. A method according to the preceding claim, wherein the end of filling plateau phase (C22) is

maintained for 2 to 8 seconds.

14. A method of molding an organic material optical component, including a step of filling an appropriate molding cavity (6) with organic material in the liquid state and a step of polymerizing the material in said molding cavity, which method is characterized in that the molding cavity (6) is filled by a method according to any preceding claim.

15. A method according to the preceding claim, wherein the material is introduced into the molding cavity (6) through an orifice (9) in the lower portion of said cavity.

16. A method according to either claim 14 or claim 15, wherein polymerization of the material is initiated immediately after complete filling of the molding cavity.